

ABSTRACT

A laser beam L1 emitted from a laser source 10 is projected onto a target 30 set in a vacuum chamber 60 while being focused by a focusing optical system 20. This results in generating fast particles P such as protons and emitting the particles from the target 30. A light measuring device 40 measures plasma emission L2 from the target 30 upon in-focus irradiation with the laser beam L1 and an analyzing device 50 analyzes a measurement signal therefrom to assess a generation state of fast particles P. Then the focusing optical system 20 and target 30 are controlled through optical system moving mechanism 25 and target moving mechanism 35 on the basis of the result of the analysis and feedback control is performed on the generation state of fast particles P in the target 30. This realizes a fast particle generating apparatus capable of monitoring the generation state of fast particles in real time and thereby efficiently generating the fast particles.
